

12-1-1983

The 1983 Iowa Corn Yield Test Report, District 4

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The 1983 Iowa Corn Yield Test Report, District 4

Abstract

Results of the Iowa Corn Yield Test are published to aid Iowa farmers in selecting corn varieties. This is the sixty-fourth consecutive year for the test.

Disciplines

Agriculture | Agronomy and Crop Sciences



- Crops
- Soils
- Climate

THE 1983 IOWA CORN YIELD TEST REPORT

District 4

Results of the Iowa Corn Yield Test are published to aid Iowa farmers in selecting corn varieties. This is the sixty-fourth consecutive year for the test.

The presentation of data for the varieties tested does not imply approval or endorsement by the authors or by the agencies sponsoring or conducting the test. Entries in tables 1 and 2 are designated by brand name and variety.

1983 Procedure

Producers of corn seed and Iowa State University were eligible to enter varieties in the Iowa Corn Yield Test. Each producer was allowed a maximum of six entries per district. All entries had to be available in a quantity of at least 10 bushels of seed.

One hundred forty-four entries were compared in this test. Fifteen of them were determined to be widely grown and were entered by Iowa State University. A widely grown entry was planted on 0.90 percent or more of the corn acreage in the district according to a 1982 survey of Iowa corn growers. Iowa State University entered a maximum of three widely grown varieties of any given brand. These entries were given priority over the remaining 129 entries made by seed producers.

Each entry was replicated four times in four-row plots at a planting rate of 25,500 kernels per acre at each location. All locations were machine-planted. The center two rows of each plot were harvested with a corn combine. No gleanings or dropped ears were included in yield data. A moisture determination was made from each plot, and yields were corrected to 15.5-percent moisture for shelled corn.

How Information Is Presented

The data presented are averages of one location in 1981, and two locations in 1982 and 1983. Yield in bushels per acre and percentage of moisture, root lodging, stalk lodging, dropped ears, and stand are shown for all entries tested in 1983 and for those tested in 1981 and 1982 that were in the 1983 test.

Prepared by K. E. Ziegler, instructor in agronomy.

Interpretation of Results

Yield differences due to variation in soil, fertility, moisture availability, insect infestation, and diseases, plus any variation due to planting and harvesting techniques, are identified through statistical analysis. The LSD values shown in tables 1 and 2 represent, in bushels per acre, the amounts of yield variation that could be due to variations in the factors just mentioned. In comparing varieties, yield differences greater than the LSD value can be attributed to genetic differences in the yield potential of these varieties; yield differences less than the LSD value are not statistically different and could have been due to other factors.

Grain moistures shown in tables 1 and 2 are indicators of maturity and natural drying rate. Maturity of varieties entered generally ranged from early to full season. Yield comparisons should be made among varieties of similar maturity.

It is important to select varieties having stable performance over a range of environmental conditions. High yields for two or more consecutive years indicate stable performance. Supplemental yield and agronomic information about specific varieties may be obtained from your seed corn dealers and from neighbors who have grown these varieties.

1983 Field Data

The District 4 test was conducted on farms operated by Don Hunter near Salix in Woodbury County and by Gerald Thiedeman near Westside in Crawford County. Field data are presented in table A.

Subsoil moisture for the district was favorable to wet at planting time. Rainfall was below normal in May, above normal in June, well below normal in July and August, and above normal in September. Temperatures were well below normal in May and June, well above normal in July and August, and variable in September with the monthly average slightly above normal. The average district yield was 21 bushels per acre lower than the mean of the five preceding years' averages.

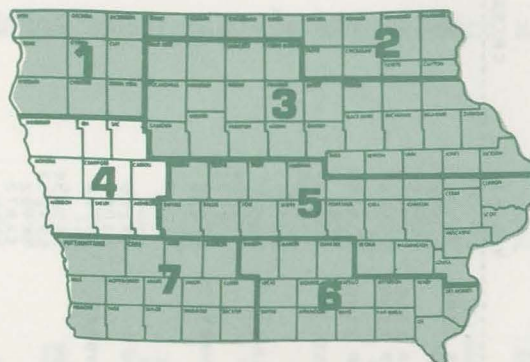


TABLE 1. AVERAGE PERFORMANCE OF VARIETIES TESTED IN DISTRICT 4.
25,500 PLANTING RATE. LSD FOR 1983 YIELD IN BUSHELS IS 11.

BRAND	VARIETY	CRCSS	YIELD BU./A			MOISTURE PCT.			ROOT LODGING PCT.			STALK LODGING PCT.			DROPPED EARS PCT.			STAND PCT.		
			1981	1982	1983	1983	1982	1981	1983	1982	1981	1983	1982	1981	1983	1982	1981	1983	1982	1981
NORTHROP KING	PX9353	SX			106	16.2			0			1	7	5	1	0		86		
JACOBSEN	JS50A	SX	131	124	103	16.6	20.4	19.5	0	1	0	7	6	5	1	0	2	85	87	90
SAR	SX4900	SX		131	105	16.6	21.5		0	0		8			1	1		97	91	
NORTHROP KING	PX9415	SX			97	16.7			0			11			1			87		
NORTHROP KING	PX9405	SX			108	16.7			0			4			0			87		
NORTHROP KING	PX9455	SX			96	16.8			0			6			1			86		
CURRY	1450	SX			107	16.9			0			4			1			86		
AMES BEST	AB108A	SX	139	141	104	17.0	20.9	19.0	0	0	0	7	11	5	0	0	1	82	94	95
*LYNKS	LX4100	SX			105	17.1			0			10			1			82		
*PIONEER	3720	SX			112	17.2			0			3			1			89		
SOKOTA	680	SX			109	17.2			0			9			1			89		
SAR	SX200A	SX	141	132	106	17.3	20.8	18.9	0	0	0	9	4	1	1	0	0	92	90	95
PAG	111571	SX			93	17.3			0			5			1			91		
GOLDEN HARVEST	H2480	SX	151	143	111	17.4	22.0	18.9	0	1	3	4	8	7	2	1	1	88	90	87
*PAG	SX397	SX	137	129	113	17.4	23.3	18.6	0	1	0	15	15	10	1	0	2	91	83	91
PFISTER	2000	SX			103	17.4			0			7			1			93		
*PIONEER	3541	SX	149	135	101	17.5	22.2	19.0	0	0	0	2	4	2	1	1	0	93	90	92
SAR	SX209	SX			113	17.5			0			5			0			90		
KRUGER	8166	SX			105	17.5			0			4			0			89		
GRUHN HYBRID	SX7AA	SX	130	127	110	17.5	21.3	19.1	0	0	0	8	16	9	1	0	2	90	91	90
RIVERSIDE	RS3335	SX			110	17.5			0			4			1			89		
LYNKS	LX4232	SX			99	17.5			0			5			0			91		
PAYCO	SX722	SX		129	109	17.7	22.1		0	0		5	3		1	0		84	80	
PAYCO	SX872	SX			99	17.7			0			4			3			81		
LEWIS	X18B	SX			96	17.7			0			4			0			74		
WILSON	1100B	SX			102	17.8			0			5			1			84		
*DEKALB	XL25A	SX	118	124	97	17.8	20.8	18.5	0	0	0	1	1	1	0	0	0	90	83	93
CURRY	1426	SX			105	17.8			0			4			0			85		
CURRY	1424	SX		140	111	17.9	21.9		0	1		3	4		0	1		90	91	
FS	454	SX			117	17.9			0			6			0			93		
CFS	5801	SX			112	17.9			0			5			0			90		
O'S GOLD	2450	SX			102	17.9			0			8			0			83		
RENZE	6244	SX			112	18.0			0			4			0			91		
MCCURDY	5596	SX			119	18.0			0			10			1			93		
ASGROW	RX717	SX			110	18.0			0			5			2			83		
MCCURDY	6555	SX	167	137	103	18.1	23.0	21.1	0	1	0	2	6	3	1	0	1	94	90	92
LEWIS	X218	SX			119	18.1			0			4			1			94		
MCALLISTER	8003	SX		137	107	18.2	22.4		0	0		5	4		0	0		85	86	
CROWS	444	SX		138	110	18.2	23.5		0	1		0	4		1	0		90	86	
HOEGEMEYER	SX2634	SX			109	18.5			0			2			1			89		
CARGILL	891	SX			101	18.5			0			4			2			89		
PIONEER	3551	SX			123	18.5			0			2			1			84		
DEKALB	T1100	SX	154	145	101	18.7	24.5	21.1	0	0	0	1	4	3	0	0	4	87	84	94
PAG	SX275	SX			103	18.7			0			2			0			94		
MCALLISTER	8307	SX			103	18.7			0			6			0			89		
OTILLIE	RD2505	SX			51	18.8			0			6			0			83		
KRUGER	8110	SX	153	145	107	18.9	24.6	21.1	0	0	0	4	5	3	1	0	0	88	92	86
KRUGER	8109	SX	133	142	121	18.9	23.5	20.5	0	0	1	5	6	2	1	0	0	86	87	76
*WILSON	1600	SX	161	142	108	19.0	24.4	21.4	0	0	1	4	5	2	1	0	0	90	91	91
SOKOTA	TS75	SX		142	116	19.0	24.6		0	1		3	6		0	0		87	88	
FS	675	SX	157	153	119	19.0	25.2	21.3	0	0	0	4	3	2	0	0	2	93	88	92
O'S GOLD	6882	SX	172	150	115	19.0	24.7	21.6	0	1	1	3	5	4	0	0	0	90	88	94
S BRAND	SS58	SXB			111	19.0			1			5			0			83		
PAYMASTER	4790	SX		139	103	19.1	23.5		0	0		3	4		0	0		89	91	
CARGILL	921	SX	147	139	100	19.1	23.3	20.4	0	1	0	11	12	7	1	0	1	92	93	92
GRUHN HYBRID	SX5A	SX		138	117	19.1	23.3		0	0		6	7		0	0		87	87	
LEWIS	X55B	SX			107	19.1			1			3			0			93		
SUPERCROST	4337	SX	152	131	117	19.2	24.6	20.8	0	1	1	2	4	2	0	0	1	95	85	84
MCALLISTER	8009	SX			104	19.3			0			4			1			90		
PFISTER	2800	SX			107	19.3			0			3			0			91		
NC+	4710	SX	144	142	113	19.3	24.7	20.9	0	2	0	6	5	3	0	0	1	88	92	88
SAR	SX212	SX	153	137	108	19.4	24.5	21.2	0	0	0	5	8	2	0	0	2	90	84	94
CURRY	1455	SX	159	141	113	19.4	24.4	21.3	0	1	0	2	5	5	0	0	1	94	91	97
MELLOW DENT	222	SX			104	19.4			0			2			1			90		
PIONEER	3377	SX		159	118	19.4	24.5		0	1		10	5		1	0		91	89	
STAUFFER	6595	SX			108	19.4			0			2			0			91		
PAYMASTER	X7190	SX			95	19.4			0			6			1			90		
S BRAND	SS59	SXB			106	19.4			0			7			0			85		
*LYNKS	LX4315	SX	148	133	112	19.5	23.4	21.9	0	1	0	5	6	3	0	0	0	89	88	88
FONTANELLE	453	SX			112	19.5			0			4			0			90		
*FUNK	G4438	SX			115	19.5			0			5			1			89		
RENZE	6346	SX			107	19.5			0			4			0			90		
STAUFFER	6596	SX	136	143	113	19.6	24.4	21.5	0	0	0	3	4	2	1	0	1	95	89	80
RIVERSIDE	RS34	SX		134	112	19.6	24.7		0	1		2			0			80		
EK PREMIUM	EK7780	SX			110	19.7			0			3			1			92		
OTILLIE	RD2450	SX	165	144	114	19.7	24.1	21.1	0	1	1	6	4	3	1	0	1	86	84	93
PAYCO	SX860	SX	157	145	108	19.7	24.7	21.3	0	1	0	2	4	3	1	0	0	89	89	88
JACOBSEN	JS46	SX		144	111	19.7	24.8		0	0		1	5		0	0		89	85	
FUNK	G4514	SX		149	114	19.7	25.3		0	0		4	5		1	1		93	90	
EK PREMIUM	EK7786	SX			117	19.7			0			3			0			87		
*DEKALB	XL55A	SX			98	19.8			0			4			0			88		
NC+	4695	SX		138	114	19.8	24.1		0	2		2	5		1	0		83	92	
CFS	6007	SX			116	19.8			0			7			0			85		
*RENZE	6350	SX			111	19.9			0			1			0			91		
CARGILL	924	SX	139	143	121	19.9	24.4	20.6	0	0	1	6	15	9	0	1	1	89	91	91
JACOBSEN	JS49	SX		137	124	19.9	23.5		0	0		3	7		1	0		90		
OTILLIE	RD2650	SX			106	19.9			0			3			0			93		
NORTHROP KING	PX9527	SX		144	108	19.9	24.9		0	0		3	2		1	0		90	84	
S BRAND	SS65	SX			120	19.9			0			9			1			93		
*ASGROW	RX777	SX	154	145	117	20.0	24.4	21.6	2	4	5	4</								

Table A. Field Data

Hunter Farm Keg silt loam				Thiedeman Farm Marshall silty clay loam		
Fertilizer applied, lbs.	N	P ₂ O ₅	K ₂ O	N	P ₂ O ₅	K ₂ O
Plowdown.....	—	—	—	145	40	20
Preplant.....	120	69	30	—	—	—
TOTAL.....	120	69	30	145	40	20
1982 crop.....	Soybeans			Soybeans		
Row width.....	30 inches			38 inches		
Planting date.....	May 13			May 9		
Harvest date.....	Oct. 6			Oct. 7		

District 4

Designations Identifying Brands in the Yield Test

Ames Best.....	Ames Best Hybrids, Ames, IA 50010
*Asgrow.....	Asgrow Seed Company, Kalamazoo, MI 49001
Cargill.....	Cargill, Inc., Minneapolis, MN 55440
C F S.....	Custom Farm Seed, Momence, IL 60954
Crows.....	Crows Hybrid Corn Co., Milford, IL 60953
Curry.....	Curry Seed Co., Elk Point, SD 57025
*DeKalb.....	DeKalb AgResearch Inc., DeKalb, IL 60115
E K Premium.....	E K Premium, Berwick, IL 61417
Federal.....	Federal Hybrids, Marion, IA 52302
Fontanelle.....	Fontanelle Hybrids, Nickerson, NE 68044
FS.....	Growmark, Inc., Bloomington, IL 61701
*Funk.....	Funk Seeds International, Inc., Bloomington, IL 61701
*Golden Harvest.....	The J. C. Robinson Seed Company, Waterloo, NE 68069
Gruhn Hybrid.....	Gruhn Hybrids, Manilla, IA 51454
Hoegemeyer.....	Hoegemeyer Hybrids, Inc., Hooper, NE 68031
Horizon.....	Horizon Seeds, Inc., Lincoln, NE 68501
Iowa State.....	Ralph Mathis, Elkhart, IA 50073
Jacobsen.....	Jacobsen Hybrid Corn Co., Inc., Lake View, IA 51450
Jacques.....	Jacques Seed Company, Prescott, WI 54021
Kruger.....	Kruger Seed Company, Cedar Falls, IA 50613
Lewis.....	Lewis Hybrids, Ursa, IL 62376
*Lynks.....	Lynks Hybrids, Marshalltown, IA 50158
McAllister.....	McAllister Seed Company, Inc., Mt. Pleasant, IA 52641
McCurdy.....	McCurdy Seed Co., Fremont, IA 52561
Mellow Dent.....	Mellow Dent Industries, Inc., Alta, IA 51002
NC+.....	NC+ Hybrids, Lincoln, NE 68504
Northrup King.....	Northrup King Co., Minneapolis, MN 55440
O's Gold.....	O's Gold Seed Co., Parkersburg, IA 50665
Ottile.....	Ottile Seed Farms, Marshalltown, IA 50158
*PAG.....	PAG Seeds, Minneapolis, MN 55440
Payco.....	Payco Seeds, Dassel, MN 55325
Paymaster.....	Paymaster Seeds, Belmond, IA 50421
Pfister.....	Pfister Hybrid Corn Co., El Paso, IL 61738
*Pioneer.....	Pioneer Hi-Bred International, Inc., Des Moines, IA 50308
*Renze.....	Renze Hybrids, Inc., Carroll, IA 51401
Riverside.....	Lynnville Seed Company, Lynnville, IA 50153
Sar.....	Sar Hybrids, Inc., Charles City, IA 50616
Schechinger.....	Schechinger Seed Co., Harlan, IA 51537
Sokota.....	Sokota Hybrid Producers, Brookings, SD 57006
Stauffer.....	Stauffer Seeds, Springfield, IL 62704
Super Crost.....	Edward J. Funk & Sons, Inc., Kentland, IN 47951
Tall Corn.....	Tall Corn Hybrids, Inc., Grinnell, IA 50112
Wilson.....	Wilson Hybrids, Inc., Harlan, IA 51537

*Companies with one or more widely grown entries made by Iowa State University.

TABLE 2. AVERAGES OF 1982-83 AND 1981-83 OF VARIETIES TESTED IN DISTRICT 4. LSD FOR YIELDS ARE 7 BUSHELS FOR 81-83 AND 8 BUSHELS FOR 82-83.

BRAND	VARIETY	CROSS	YIELD BU./A		MOISTURE PCT.	
			81-83	82-83	82-83	81-83
JACOBSEN	JS50A	SX	119	114	18.5	18.8
AMES BEST	AB108A	SX	128	122	18.9	19.0
SAR	SX200A	SX	126	119	19.0	19.0
SAR	SX4900	SX		118	19.0	
*DEKALB	XL25A	SX	113	110	19.3	19.0
GRUHN HYBRID	SX7AA	SX	122	118	19.4	19.3
GOLDEN HARVEST	H2480	SX	135	127	19.7	19.4
*PIONEER	3541	SX	128	118	19.8	19.6
CURRY	1424	SX		125	19.9	
PAYCO	SX722	SX		119	19.9	
MCALLISTER	8003	SX		122	20.3	
*PAG	SX397	SX	126	121	20.3	19.8
MCCURDY	6555	SX	135	120	20.5	20.7
CROWS	444	SX		124	20.8	
CARGILL	921	SX	129	120	21.2	20.9
GRUHN HYBRID	SX5A	SX		127	21.2	
KRUGER	8109	SX	132	131	21.2	21.0
PAYMASTER	4790	SX		121	21.3	
FONTANELLE	435	SX	132	125	21.4	21.6
DEKALB	T1100	SX	133	123	21.6	21.4
*WILSON	1600	SX	137	125	21.7	21.6
JACOBSEN	JS49	SX		130	21.7	
KRUGER	8110	SX	135	126	21.7	21.5
SOKOTA	TS75	SX		129	21.8	
O'S GOLD	6882	SX	146	132	21.8	21.8
SUPERCROST	4337	SX	134	124	21.9	21.5
OTTILIE	R02450	SX	141	129	21.9	21.6
CURRY	1455	SX	137	127	21.9	21.7
NC+	4695	SX		126	21.9	
SAR	SX212	SX	133	123	21.9	21.7
PIONEER	3377	SX		138	21.9	
STAUFFER	6596	SX	131	128	22.0	21.8
NC+	4710	SX	133	127	22.0	21.6
HORIZON	211	SX		130	22.0	
*LYNKS	LX4315	SX	138	128	22.1	22.1
FS	675	SX	143	136	22.1	21.8
CARGILL	924	SX	134	132	22.1	21.6
RIVERSIDE	RS34	SX		123	22.1	
*ASGROW	RX777	SX	139	131	22.2	22.0
PAYCO	SX860	SX	136	126	22.2	21.9
*RENZE	6340	SX	139	126	22.2	22.3
JACOBSEN	JS46	SX		127	22.2	
IOWA STATE	M116	SX	141	131	22.3	22.0
NORTHROP KING	PX9527	SX		126	22.4	
FUNK	G4514	SX		132	22.5	
NC+	6190	SX		129	23.0	
FEDERAL	FX39	SX	127	115	23.0	22.7
HORIZON	861	SX		124	23.0	
FONTANELLE	580	SX	139	130	23.0	22.8
*PIONEER	3388	MSX	128	120	23.1	22.8
PAYCO	SX900	SX		134	23.1	
WILSON	1800B	SX		130	23.1	
*GOLDEN HARVEST	H2500	SX	134	119	23.1	22.9
STAUFFER	7767	SX		132	23.1	
HOEGEMEYER	SX2684	SX	140	129	23.2	23.3
LEWIS	X598	SX		131	23.2	
LYNKS	LX4355	SX		135	23.2	
MCCURDY	7384	SX		127	23.2	
RIVERSIDE	RS23A	SX		133	23.2	
CURRY	1490	SX		133	23.2	
O'S GOLD	5500A	SX	144	134	23.4	23.2
PAG	SX351	SX	139	131	23.7	23.4
FUNK	G4522	MSX	136	128	23.9	23.6
GRUHN HYBRID	SX9AA	SX	142	127	24.0	23.4
PFISTER	KERNOIL	SX		123	24.6	
HORIZON	880	SX		137	24.9	
SUPERCROST	7600	SX	136	127	25.2	25.3

Other Reports

Separate reports for variety performance are available for each district shown in fig. 1. These publications are available at your county extension office or from Publications Distribution, Printing and Publications Building, Iowa State University, Ames, Iowa 50011.

The 1983 Iowa Corn Yield Test Report:

- Pm-660-1-83 District 1
- Pm-660-2-83 District 2
- Pm-660-3-83 District 3
- Pm-660-4-83 District 4
- Pm-660-5-83 District 5
- Pm-660-6-83 District 6
- Pm-660-7-83 District 7



and justice for all

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